

### REMARKS

Claims 6, 8, 9, 19-46, 48 and 49 have been canceled.

Claims 1-5, 7, 10-18 and 47 remain pending in the application. Of these, claims 1 and 47 are currently amended.

Claims 1-5, 7, 9-18 and 47 are rejected under 35 U.S.C. 103(a) over Orejola US 4,985,014 (Orejola '014) in view of Jarvik US 5,376,114 (Jarvik '114) and Koros et al. US 5,167,223 (Koros '223). Independent claims 1 and 47 have been amended in view of these rejections to define a system in which a reverse flow pump, at least of portion of which is sized and configured for placement within a chest cavity, communicates with first and second flow paths to intake blood in a first direction downstream of the pump through the first flow path at a first location and to output blood in a reverse direction through the second flow path at the second location and having a priming volume of not greater than about 1000 ml. Orejola '014 discloses a ventricular venting loop in which a pump 10 is sized and configured for placement exterior to the body (see Figs. 1 and 2) and therefore not sized and configured for placement within a chest cavity as defined by the amended claims 1 and 47. Jarvik '114 discloses a cannula pump 10 for temporary cardiac support. In the pump 10 of Jarvik '114, blood directly encounters the axial flow pump hydrodynamic elements upon entering the pump 10 through side holes 15 (see col. 6, lines 9-17). That is, blood intake is not downstream of pump 10. As a result, blood flow is in a single direction and follows a single flow path. Therefore, the pump of Jarvik '114 would not be suitable for use with the dual cannula/dual flow path system of Orejola '014. Accordingly, it would not be obvious to one of ordinary skill in the art to have combined the pump of Jarvik '114 with the cannula system of Orejola '114. The failure of Orejola '014 and Jarvik '114 to disclose the claimed subject matter is not redeemed by further recitation of Koros '223. Dependent claims 2-5, 7 and 9-18 further define the subject matter of claims 1 and 47 and therefore are also believed to be allowable over the cited references.

Application Serial No. 09/440,462

Amendment D

Page - 6 -

Reconsideration in view of the foregoing amendments and remarks and allowance of claims 1-5, 7, 10-18 and 47 is respectfully requested.

Respectfully Submitted,

By Patricia A. Limbach  
Patricia A. Limbach  
Registration No. 50,295

RYAN KROMHOLZ & MANION, S.C.

Post Office Box 26618

Milwaukee, Wisconsin 53226

(262) 783 - 1300

19 October 2004

Customer No.: 26308

A-Med/116765-CIP X/041019 AMENDMENT D

Enclosures: RCE Transmittal Letter  
Return postcard